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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,481	10/20/2003	Paul Favret	040117-000200US	3852

20350 7590 01/13/2006

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EXAMINER

TAYLOR, VICTOR J

ART UNIT	PAPER NUMBER
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2863

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/690,481	Applicant(s) FAVRET ET AL.	
	Examiner Victor J. Taylor	Art Unit 2863	

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-26 is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>Office Action</u> . |

DETAILED ACTION

Drawings

1. The drawings were received on 20 October 2003. These drawings are approved.

Response to Arguments

2. Applicant's arguments see response to arguments, filed 6 September 2005, with respect to the rejection of claims 1-26 under 102 (b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the 101 issues now found under the new ruling concerning the lack of tangible results and the lack of concrete result for the practical application as found in independent claims 1, and 17.
3. The applicants arguments for claims 1, 17 and 21 concerning the computation calculation of a cross-correlation between the data volume "cube" and the data sub-volume "subcube", and the argument for the calculation of a cross-correlation "computer usage" in an N-dimensional volume (X, Y, Z) about the plurality of sub-volume positions differs from the event dissimilarity as found in the cited art and are persuasive. However, the independent claim limitation structure as found in independent claim 1 and independent claim 17 is found to lack the tangible results and the concrete results for the practical application.

Prior Art

4. The prior art made of record and not relied upon is considered pertinent to applicant:

I. Nickel in US 6,640,190 in class 702/014 is cited for the method for 3-D depth migration steps for estimating subsurface geophysical data with methods to process first data sets and second data sets of digital subvolume data in figure 1 using subvolume data taken from the volume data set 1102 in figure 11 along the Z trace direction in lines 5-60 of column 6.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-20 are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a complete calculations by process asserted utility or a well-established utility. Independent claims 1 and 17 lack the tangible results and the concrete results for the practical application and fail to show the complete steps for the calculations by process and the steps are not complete with the required apparatus for the computation including the measurement of data and the storage of data with the necessary steps for the calculations of data.

As to claims 2-16 and claims 18-20, which are variously dependent on the rejected base claims stand rejected as based on the rejected base claims.

Claims 1-20 are also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a tangible result or concrete result for the practical application and asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

As to claims 2-16 and claims 18-20 and variously dependent on rejected base claims stand rejected as based on the rejected base claims.

Allowable Subject Matter

6. Claims 21-26 are allowed.

7. The following is an examiner's statement of reasons for allowance:

I. The arguments of record for investigating the geophysical data with the steps and the apparatus for receiving and using the calculations "at each of a plurality of positions within the first N-dimensional volume, a cross correlation between the data distribution within the subvolume and corresponding data distribution in the first N-dimensional volume about the each of the plurality of positions" of record is not found in the cited art of record. And therefore,

The limitations found in claim 21 for a computer readable storage medium having a computer readable program embodied therein for directing the operation of a computer system including a input device and a processor and a display device wherein the computer readable program includes instructions for operating the computer system for investigating geophysical data with the steps for receiving the geophysical image set data and the geophysical target set data with the instructions for identifying a subvolume of the image data with the particularly claimed steps for the calculations using the computer processor for "a plurality of positions within the first N-dimensional volume, a cross correlation between the data distribution within the subvolume and corresponding data distribution in the first N-dimensional volume about the each of the plurality of positions" is not found in the cited art of record.

It is these limitations expressed in each of these claims and not found, taught, or suggested in the prior art of record, that makes these claims allowable over the prior art.

Claims 22-26 are variously dependent on the allowed independent claim 21 and are allowed at least for the reasons cited above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor J. Taylor whose telephone number is 517-272-2281. The examiner can normally be reached on 8:00 to 5:30 PM.

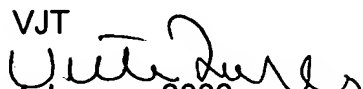
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on 571-272-2863. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

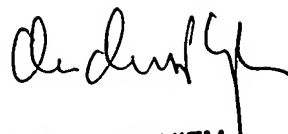
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/690,481
Art Unit: 2863

Page 6

VJT


4 January 2006.



MICHAEL NGHIEM
PRIMARY EXAMINER